

WHAT IS CLAIMED IS:

1. A process for forming an in-plane switching liquid crystal display device, comprising:
defining a first liquid crystal cell area that has a first size and a second liquid crystal cell area that has a second size on a first bare glass, wherein first longer sides of the first liquid crystal cell area run in a first direction on the first bare glass and second longer sides of the second liquid crystal cell areas run in a second direction;
forming array elements that include thin film transistors, common electrodes and pixel electrodes within the first and second liquid crystal cell areas of the first bare glass, wherein the common electrodes and the pixel electrodes define concentric ring-shaped apertures;
rubbing the first bare glass having the array elements in a first rubbing direction;
forming a color filter layer on a second bare glass wherein liquid crystal cell areas corresponding in size to the first and second liquid crystal cell areas are defined; and
rubbing the second bare glass having the color filter in a second rubbing direction opposite to the first rubbing direction.
2. The process of claim 1, wherein the first rubbing direction is one of 0, 45, 90, 135, 180, 225, 270 and 315 degrees.
3. The process of claim 1, wherein the first size is larger than the second size.
4. The process of claim 1, wherein the first direction is from left to right and the second direction is from top and bottom on the first bare glass.

5. The process of claim 1, wherein the first direction is parallel with the second direction.
6. The process of claim 1, wherein the forming the array elements includes forming a gate line horizontally, a data line longitudinally and a common line parallel with the gate line.
7. The process of claim 6, wherein the gate line and data line cross each other and define a pixel region.
8. The process of claim 7, wherein the array elements are disposed within the pixel region.
9. The process of claim 6, wherein the common electrode includes a first ring-shaped common electrode pattern and a second ring-shaped common electrode pattern, and half portions of both first and second ring-shaped common electrode patterns extend from the common line in opposite directions.
10. The process of claim 9, wherein the second ring-shaped common electrode pattern is smaller than the first ring-shaped common electrode pattern and is disposed inside the first ring-shaped common electrode pattern.
11. The process of claim 10, wherein the pixel electrode includes a ring-shaped pixel electrode pattern between the first and second ring-shaped common electrode patterns, and a bullseye-shaped pixel electrode pattern inside the second ring-shaped common electrode pattern.

12. The process of claim 11, wherein the pixel electrode is connected to the thin film transistor through a pixel connecting line that connects the ring-shaped circular pixel electrode to the bullseye-shaped pixel electrode.

13. An in-plane switching liquid crystal display device, comprising:

a first liquid crystal cell area that has a first size and a second liquid crystal cell area that has a second size on a first bare glass, wherein first longer sides of the first liquid crystal cell area run in a first direction on the first bare glass and second longer sides of the second liquid crystal cell areas run in a second direction;

array elements that include thin film transistors, common electrodes and pixel electrodes within the first and second liquid crystal cell areas of the first bare glass, wherein the common electrodes and the pixel electrodes define concentric ring-shaped apertures; and

a color filter layer on a second bare glass having liquid crystal cell areas corresponding in size to the first and second liquid crystal cell areas are defined.

14. The device of claim 13, further comprising:

a plurality of first liquid crystal cell areas running in the first direction, wherein the first longer sides of the plurality of first liquid crystal cell area run in the first direction; and

a plurality of second liquid crystal cell areas running in the second direction, wherein second longer sides of the plurality of second liquid crystal cell areas run in the second direction.

15. The device of claim 13, wherein the first size is larger than the second size.

16. The device of claim 13, wherein the common electrode includes a first ring-shaped common electrode pattern and a second ring-shaped common electrode pattern, and half portions of both first and second ring-shaped common electrode patterns extend from the common line in opposite directions.

17. The device of claim 13, wherein the second ring-shaped common electrode pattern is smaller than the first ring-shaped common electrode pattern and is disposed inside the first ring-shaped common electrode pattern.

18. The device of claim 17, wherein the pixel electrode includes a ring-shaped pixel electrode pattern between the first and second ring-shaped common electrode patterns, and a bullseye-shaped pixel electrode pattern inside the second ring-shaped common electrode pattern.

19. The device of claim 18, wherein the pixel electrode is connected to the thin film transistor through a pixel connecting line that connects the ring-shaped circular pixel electrode to the bullseye-shaped pixel electrode.